6. Effects of Access Reform

128. In the Access Reform Notice, we invited comment on the potential effects of access reform on TFP.[206] Some parties argue that replacing the per-minute carrier common line charge with a per line charge will depress measured TFP because access lines have historically grown more slowly than access minutes.[207] USTA argues that if either competition or regulatory action reduces the price-marginal cost margin on rapidly growing services, measured TFP will fall. USTA concedes it has no direct evidence of the expected magnitude of this effect and makes no specific prediction of the size of the reduction in TFP growth.[208] USTA estimates, however, that its access reform proposal, holding everything else constant, would reduce measured TFP growth for the period from 1990 to 1995 by 0.4 percent by changing the revenue weights of per-line and per-minute common line services.[209] USTA claims support for its assertion that measured TFP growth will be affected by restructuring the collection of common line costs from two articles from the literature of economics.[210] On the other hand, AT&T anticipates that access reform would increase productivity growth, because reducing rates to cost-based levels would stimulate demand.[211]

129. We find that USTA has not sufficiently considered the effect that moving prices towards marginal cost will have on LEC efficiency. Under our current access rate structure rules, before the revisions adopted in our companion Access Reform First Report and Order, incumbent LECs are often unable to offer access services at rates that reflect the manner they incur costs and therefore are faced with artificially depressed demand. The implicit cross-subsidies in our current access rate structure rules have resulted in increased demand for certain services and decreased demand for others. When demand for services is distorted in this fashion, incumbent LECs must provide those services at levels that do not enable them to minimize their per-unit costs. When prices reflect marginal costs, however, consumers increase their purchases of services previously priced above marginal cost, and reduce their purchases

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[206] Access Reform Notice at para. 233.

[207] US West 1997 Comments at 55; Aliant 1997 Comments at 68; USTA 1997 Reply at 40-41 and Att. 3 at 9-10.

[208] USTA 1997 Comments, Att. 5 at 7-8.

[209] USTA assumes that carrier common line charges are billed on a presubscribed line basis, and that the transport interconnection charge is collected on a bulk-billed basis. USTA 1997 Comments, Att. 5 at 8-9.

[210] USTA 1997 Comments, Att. 5 at 7 nn. 10, 11; citing Crandall and Galst, Productivity Growth in the U.S. Telecommunications Sector: The Impact of AT&T Divestiture (The Brookings Institution, February 1991) (Crandall and Galst); Fuss, Telecommunications Growth in Canadian Telecommunications, Canadian J. Econ. (May 1993).

[211] AT&T 1997 Reply at 35-36.

of services previously priced below marginal cost. The net result of such a change in rate structure will allow LECs to minimize the per-unit cost of producing their total output. Based on the current record, we find that access reform will have at most a very modest effect on the revenue weights used to aggregate output and that this effect will be offset at least in part by changes on the input side of the TFP equation as LECs adjust inputs to produce a more efficient mix of outputs. Thus, it would be speculative to attempt to adjust our TFP estimates now.

130. The articles cited by USTA are consistent with this analysis. They provide support only for the proposition that, if everything else is held constant, adjusting the weights of each category of LEC outputs for the margin between price and marginal cost reduces measured output, measured TFP, and TFP growth.[212]

131. Some parties contend that measured TFP will decrease under competition because incumbent LEC output will fall as new entrants successfully compete for existing customers. USTA asserts that a one percent reduction in LEC output growth will reduce LEC TFP growth by 0.3 to 0.5 percent. We are not persuaded that we should reduce our baseline productivity estimates we are using here to set an X-Factor that will apply to all incumbent price cap LECs and all their access services. We are not deciding what, if any, changes to the X-Factor we should make with the lowering of barriers to competitive entry or the development of competition.[213]

132. In summary, we find that the parties have not shown it reasonable to reduce the measured TFP growth of incumbent LECs in light of the overall effect of the rate restructuring adopted in the Access Reform First Report and Order.

E. Analysis and Prescription

133. Above, we have examined several individual issues regarding TFP calculation, determination of the input price differential, and other X-Factor calculation issues. On the basis of the record in this proceeding, we have determined the best available methods to perform each of the calculations necessary to conduct a TFP study, and we have developed a reasonable prediction of the future input price differential. We recognize that the results of any study are reliable only to the extent that the data used in the study is taken from a consistent series, and that the methods used in the study are internally consistent. We conclude that our staff analysis relies on consistent data sources and methods, and that our input price differential findings are based on consistent and reliable data.

[212] Crandall and Galst at 28-29.

[213] See Section IV.C., infra.

134. For reasons discussed in Section V. below, we have decided not to adopt a moving average mechanism to update the X-Factor. In the Price Cap Fourth Further Notice, we sought comment on the best time period for studies used to calculate a fixed X-Factor.[214] Ad Hoc contends that we should use all the data since 1984, arguing that the divestiture of the Bell System in 1984 creates a "break" in the data, and that comparing data from before and after that time could yield anomalous results.[215] AT&T also uses post-divestiture for its TFP study. USTA recommends basing the X-Factor on a five-year moving average, and includes post-1988 data in its TFP study. USTA also contends, however, that the relevant period for the input price differential is from 1948 to the present. No other party commented on this issue. As discussed below, we base our analysis on data from 1986 to 1995.

135. USTA criticizes AT&T's model because it includes data only from the Bell Operating Companies (BOCs), while USTA's model includes data from GTE, Sprint, SNET, and Lincoln.[216] USTA also finds, however, that including non-BOC data results in only a 0.1 percent difference in the X-Factor for the period from 1988 to 1994, and no difference from 1989 to 1994.[217] In our analysis of the record, we rely only on BOC data, as AT&T does.

136. Parties have presented a wide range of X-Factor recommendations in our two proceedings. On the basis of its model, USTA proposes X-Factors ranging from 2.7 to 3.1.[218] At the other extreme, AT&T and Ad Hoc propose X-Factors between 8.0 and 10.0, in part on the basis of adjusting TFP for interstate productivity.[219] As discussed above,[220] MCI proposes an X-Factor of 8.5 percent based on a non-TFP methodology. Recently, a number of parties filing a joint ex parte statement have advocated an X-Factor of at least 7.5 percent, based largely on MCI's and Ad Hoc's recommendations.[221]

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[214] Price Cap Fourth Further Notice, 10 FCC Rcd at 13675 (paras. 104-06).

[215] Ad Hoc Reply, Att. at 25-26.

[216] USTA 1997 Comments, Att. 6 at 28-29.

[217] USTA 1997 Comments, Att. 6 at 29-30.

[218] See USTA 1997 Comments, Att. 5 at 1-4; USTA Comments, App. A at 30-32.

[219] Ad Hoc proposes 9.9 percent and AT&T proposes 8.5 percent. Ad Hoc Reply, Att. at 36; AT&T 1997 Reply, App. G at 32.

[220] See Section III.B.1., supra.

[221] On April 16, 1997, the American Petroleum Institute, Consumer Federation of America, Consumers Union, International Communications Association, Michigan Consumer Federation, Oregon Citizens' Board, and the National Retail Federation filed a joint ex parte statement in CC Docket Nos. 96-45 and 96-262. Ex Parte Letter from Brian R. Moir, Counsel to the International Communication Association, to William F. Caton,

137. The table in this Section presents the yearly X-Factor estimates (TFP plus any input price differential) submitted by USTA and AT&T, and the results of our analysis of the best methods and data available in the record of this proceeding, as well as various multi-year averages of total company productivity derived from the AT&T model and our own analysis. In its model, Ad Hoc does not present comparable yearly estimates, but only average estimates. We find that, for the 1985-95 period, the average annual growth in TFP estimated by USTA's simplified TFP model are about 0.2 percent less than our estimates. Based on more recent periods, the differences are somewhat greater. As discussed above, however, USTA has not provided any reliable estimate of the input price differential. For that reason, we cannot give any weight to its X-Factor estimates. Also as discussed above, Ad Hoc's model relies heavily on methodologies USTA employed in its original TFP model reviewed in the LEC Price Cap Performance Review and discussed in the Price Cap Fourth Further Notice. Ad Hoc's adjustments to the USTA original model do not adequately address the problems we found with that model, so we also give no weight to Ad Hoc's X-Factor estimates. We also place no weight on the joint ex parte statement's recommendation, which relies, without further analysis, on the MCI, Ad Hoc, and AT&T interstate-only proposals.[222] Our analysis does incorporate a number of the methods advocated by AT&T, but AT&T's estimate of the X-Factor relies as well on methods that do not provide the best estimates of productivity from this record. Thus, we will accord some weight to AT&T's estimates of the X-Factor, but will rely primarily on our own analysis, which is a synthesis of the most persuasive treatment of TFP suggested by the record. The results of our analysis are displayed in the table below.

Acting Secretary, FCC, April 16, 1997 (Joint Ex Parte Statement).

[222] The joint parties cite MCI's X-Factor proposal of an 8.5 percent X-Factor, Ad Hoc's proposal of 10 percent, and AT&T's interstate-only TFP proposal of 8.5 percent, and argue that the X-Factor should be at least 7.5 percent on the basis of these proposals. Joint Ex Parte Statement at 17-18. We explained in Sections III.B.1. and III.C.2., above, why we do not rely on MCI's and Ad Hoc's X-Factor calculations. In Section III.D.2., we conclude that we can place no weight on AT&T's interstate TFP adjustment. The Joint Ex Parte Statement relies on MCI's, Ad Hoc's, and AT&T's comments without providing any further analysis, and therefore provides no basis for reconsidering this conclusion.

SUMMARY OF X-FACTORS

YEAR	FCC	AT&T	USTA
1986	-0.5%	0.2%	N/A
1987	5.0%	4.1%	N/A
1988	5.0%	6.4%	N/A
1989	7.9%	8.8%	2.1%
1990	8.8%	11.0%	4.0%
1991	5.8%	6.0%	3.0%
1992	3.4%	4.1%	2.0%
1993	4.7%	6.0%	3.1%
1994	5.4%	5.9%	1.8%
1995	6.8%	9.4%	3.5%
Ave (86,95)	5.2%	6.2%	
Ave (87,95)	5.9%	6.9%	
Ave (88,95)	6.0%	7.2%	
Ave (89,95)	6.1%	7.3%	2.8%
Ave (90,95)	5.8%	7.1%	2.9%
Ave (91,95)	5.2%	6.3%	2.7%

138. The upper portion of the Table shows the year-by-year estimates of the X-Factor. The lower portion shows a series of averages of the annual X-Factor estimates derived from our analysis of the record and from the AT&T model. The first average includes all the years for which estimates were made. The next average excludes the oldest estimate. Each subsequent average drops the next oldest estimate until the average includes only the most recent five years, from 1991 to 1995. Taken as a whole, this series of averages gives the least weight to the oldest estimate, because that estimate only appears in the first average, and the most weight to the most recent five estimates, because these estimates appear in every average. We find that these averages, rather than the yearly estimates, provide the most reliable basis in the current record for estimating incumbent LEC productivity targets (including input price differential) for the immediate future. The "trimming" of the averages yields a range of possible productivity outcomes based on progressively more current sets of yearly estimates.

139. Focusing on the staff estimates, we note that the middle four averages are closely grouped around 6.0 percent. The first and last averages are 5.2 percent. We conclude that it

is reasonable to place less weight on these two averages. The first average is heavily influenced by the improbably low 1986 estimate of -0.5 percent. The estimate for 1986, the first period for which we have data, is improbably low in comparison to all the other estimates: the next lowest estimate is +3.4 percent and seven of the ten estimates are +5 percent or higher. The last average (1991-95) is the average most affected by the low 1992 estimate. The decline in the measured X-Factor in 1992 appears to be an artifact of a one-year jump in the measured productivity of the national economy as economic activity increased, rather than a change in the growth rate of LEC productivity or input prices. The measured TFP of the U.S. economy appears to be more sensitive to the business cycles than the measured TFP of LECs. Furthermore, we note that, although there are years in which incumbent LECs were able to achieve measured X-Factors that exceed 6 percent, there is no extended time period over which the measured X-Factor remained substantially above 6 percent. We also note that from 1993 onward there has been an upward trend in the X-Factor, with the 1995 estimate being 6.8 percent. The estimates provided by AT&T are somewhat higher than our analysis, but show the same pattern.

140. Based on this analysis, we conclude that a reasonable, challenging productivity offset for incumbent LECs lies within a range whose lower bound is 5.2 percent. If we were relying exclusively on our own analysis, we would conclude that the upper bound of our range of reasonableness is 6.1 percent. As a result of our reliance to some extent on AT&T's results, however, we have increased the upper bound of the range of reasonableness slightly, to 6.3 percent.

141. Because the averages listed above tend to show that the incumbent price cap LECs have fairly consistently achieved productivity growth near or at the upper end of the range of reasonableness, and because there appears to be a strong upward trend in productivity growth from 1992 to 1995, we determine that the most reasonable course at this time is to set the X-Factor in the upper portion of this range, 6.0 percent. AT&T's estimates reflecting total company productivity rather than interstate productivity alone, which range from 6.2 to 7.3 percent, also suggest that we should prescribe an X-Factor near the upper bound of the range of reasonableness. As discussed elsewhere, in order to ensure that increased benefits from the increased productivity we expect from incumbent LECs flow through to price cap customers, we also adopt a CPD of 0.5 percent, bringing the overall X-Factor prescribed for use in price cap PCIs to 6.5 percent. We are confident that an X-Factor of 6.5 percent can be achieved by the incumbent price cap LEC industry, yet provides a substantial increase over our current price cap plan in the benefits flowed through to price caps customers.

142. We expect the price cap LEC industry to be able to meet this target, for several reasons. First, price cap regulation seeks to replicate the incentives of a competitive market, but it is clearly not a substitute for competition. As a result, measured LEC TFP may not measure the actual productivity growth that incumbent LECs can achieve, but rather reflects the productivity growth LECs were encouraged to achieve under our original and interim price cap

plans. Under price cap regulation, LECs are required to reduce their prices only to the extent that their PCIs have been lowered by application of the price cap formulas, and are permitted to keep the rest of the cost reduction in the form of higher earnings. To the extent that a price cap LEC has not reduced its prices as much as it has reduced its costs under price cap regulation, and to the extent that lower prices would have led to demand stimulation, higher output growth, and the realization of additional scale economies, then measured LEC TFP underestimates the productive growth the price cap LECs could achieve with the right incentives. To the extent that LEC anticipated earnings would fall in the sharing range, LECs had less incentive than a firm operating under competition to realize all the possible productivity gains. It is not clear how great this underestimation is, given that not all price cap LECs set their prices so that their APIs are equal to their PCIs. On the other hand, many LECs were subject to sharing obligations under the original price cap plan.[223] On balance, we believe that measured LEC TFP may somewhat understate achievable gains in TFP. A second reason that we believe that LECs can achieve our 6.5 percent X-Factor is due to the actions we are taking in our Access Reform First Report and Order, which should greatly stimulate usage. We expect this increase in usage to lead to more efficient use of the LEC network.

143. In summary, we retain our existing formula for adjusting price cap PCIs. We decline to adopt a PCI adjustment formula based on a direct approach, i.e., a PCI formula excluding any economy-wide measure of inflation, because we have decided to prescribe an X-Factor at this time rather than adopt rules to calculate a new X-Factor each year and update the X-Factor using a five-year moving average. In addition, we find that the X-Factor should include LEC TFP and an input price differential. For the reasons discussed above, we find that TFP should be based on the Commission's prescribed depreciation rates. We have decided against adopting any interstate TFP adjustment, hedonic adjustment, or any adjustment based on the productivity growth of other industries. We also find that USTA has inadequately supported its contention that the input price differential is not significantly different from zero.

IV. PRICE CAP STRUCTURE ISSUES

A. Overview

144. We are today substantially revising the structure of our price cap plan to reflect the pro-competitive, deregulatory paradigm established by the 1996 Telecommunications Act as well as the enhanced methodologies and data available for estimating incumbent LEC productivity gains. By eliminating sharing, we are removing a major vestige of rate-of-

[223] In the LEC Price Cap Performance Review, we found that, from 1991 to 1994, the cumulative effect of savings due to below-cap filings was $1.14 billion, and the cumulative net effect of sharing obligations and low-end adjustments was $152 million. LEC Price Cap Performance Review, 10 FCC Rcd at 8987 (para. 60).

return regulation and eliminating the strongest LEC incentives to shift costs between services.[224] We also establish a structure conducive to the growth of competition and to progressive deregulation of incumbent LEC interstate access services as competition develops.[225]

145. Based on the limited information then available, both the original and the interim LEC price cap plans included multiple X-Factors, ranging from 3.3 percent to 5.3 percent, many with sharing obligations that provided LECs in sharing zones with rate-of-return-like incentives. Today, as discussed above, we prescribe a 6.5 percent X-Factor based on a total factor productivity analysis of the impact that LEC productivity growth and the change in LEC input prices have had on LEC industry unit costs over a ten-year period. Both the methodology and the data used in this analysis more accurately reflect price cap carriers' ability to reduce per-unit costs than previous studies used to set the X-Factor.[226] To ensure consumers share in all increases in LEC efficiency, and to provide efficiency-enhancing incentives to those LECs whose past performance has exceeded the industry average, we are adding a 0.5 percent CPD to the X-Factor.

146. In light of these changes, we here eliminate sharing as part of our overall strategy to devise a more deregulatory and efficiency-enhancing regulatory framework. The elimination of sharing removes a major vestige of rate-of-return regulation Additionally, the elimination of sharing facilitates progressive deregulation as services become subject to competition.

B. Sharing Obligations

147. Background. In the LEC Price Cap Performance Review, we found that sharing blunts the efficiency incentives that we sought to create with price cap regulation.[227] Therefore, we tentatively concluded that sharing should eventually be eliminated.[228] We also noted in the LEC Price Cap Performance Review and the Price Cap Fourth Further Notice, however, that sharing served a number of purposes in the price cap structure we then

[224] This assumes of course that the X-Factor continues to be calculated on an industry-wide basis.

[225] According to NYNEX, Congress identified price cap regulation as a mechanism to encourage infrastructure investment when it adopted the 1996 Act, and eliminating sharing would further encourage infrastructure investment. NYNEX Reply at 21, citing Section 706(a) of the Telecommunications Act of 1996, 47 U.S.C. § 706(a).

[226] See LEC Price Cap Order, 5 FCC Rcd at 6885-6941 (App. C, App. D.); LEC Price Cap Performance Review, 10 FCC Rcd at 9159-95 (App. D).

[227] LEC Price Cap Performance Review, 10 FCC Rcd at 9045-46 (paras. 187-89).

[228] LEC Price Cap Performance Review, 10 FCC Rcd at 9049 (para. 197).

adopted. One such purpose was a "backstop" function, which helped ensure that any errors in the X-Factor did not lead to unreasonably high rates. A second purpose was a "flow-through" function, which helped ensure that LEC reductions in unit costs were passed through to their customers. We also found that sharing served a useful "matching" function in a price cap plan with two or more X-Factors by encouraging LECs to adopt an X-Factor that most closely matched their internally expected rate of productivity growth.[229] In the Price Cap Fourth Further Notice, we proposed eliminating sharing if other mechanisms could be found to serve these functions, and we solicited comment on whether it might be possible to eliminate sharing from the price cap plan without replacing the three functions.[230]

148. Discussion. In the LEC Price Cap Performance Review, we established the goal of eliminating sharing completely from price cap regulation. For the various reasons set out below, we conclude that we can and should now adopt a price cap structure without sharing. As discussed in the LEC Price Cap Performance Review, sharing severely blunts the efficiency incentives of price cap regulation by reducing the rewards of LEC efforts and decisions. These reduced incentives, we argued, can be expected to generate lower LEC efficiency, which in turn would reduce the benefits of price caps to consumers.[231] The removal of sharing also removes a major vestige of rate-of-return regulation that created incentives to shift costs between services to evade sharing in the interstate jurisdiction. When a price cap LEC anticipates earnings will fall in the sharing range, every dollar of cost misallocated from services not subject to regulation decreases the LEC's interstate sharing obligation and increases recorded earnings on those other services.

149. We find that a price cap regulatory structure without sharing best serves the public interest now even though we have not so found in the past. We have selected an achievable but significantly more demanding X-Factor than we have in the past that will give customers their greatest assurance ever of real reductions in interstate access charges. We also believe that our X-Factor selection is a more reliable estimate of actual LEC productivity than in the past. In particular, we have based our previous X-Factors on a very indirect measure of productivity -- changes in output prices -- and used a very limited range of data. We are basing our X-Factor prescription on a detailed direct analysis of productivity that applies a well-developed Total Factor Productivity methodology to publicly available data measuring ten years of incumbent LEC industry productivity. As a result, we find that sharing is no longer necessary to ensure that price cap customers benefit from price cap regulation, or to deal with uncertainty in selecting a reasonable X-Factor.

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[229] LEC Price Cap Performance Review, 10 FCC Rcd at 9047-49 (paras. 193-96). See also Price Cap Fourth Further Notice, 10 FCC Rcd at 13676-77 (paras. 113-15).

[230] Price Cap Fourth Further Notice, 10 FCC Rcd at 13679 (para. 127).

[231] LEC Price Cap Performance Review, 10 FCC Rcd at 9045 (para. 187).

150. We also conclude that our new price cap structure better suits the advent of competition that lies at the heart of the 1996 Act. Subjecting incumbent LECs to a price cap structure that better replicates the discipline of a competitive marketplace is warranted as we move toward competition itself. Furthermore, we conclude that we should adopt a price cap structure that readily lends itself to the further regulatory changes we anticipate will be warranted as competition develops for access services in various geographic areas. Finally, we find that reducing our regulatory reliance on earnings calculations based on accounting data is essential to the transition to a competitive marketplace, where forward-looking costs are central to decisionmaking.

151. Several carriers advocated eliminating sharing, either without regard to the purposes of sharing listed in the Price Cap Fourth Further Notice, or because they expect increased competition to replace one or more of those functions.[232] Certain commenters in this proceeding have argued that the existence of sharing would unreasonably complicate the removal of some services from price cap regulation as those services become sufficiently competitive so as to no longer warrant regulation.[233] We agree that sharing might be a serious impediment to deregulation. Therefore, our goal of eventual deregulation provides an additional reason to seek to eliminate sharing. Not only is sharing inconsistent with the general competitive paradigm that was established in the 1996 Act, but sharing might make it more difficult to deregulate services that become subject to substantial competition by creating an opportunity for LECs to misallocate costs from deregulated common carrier services to services that remain subject to sharing requirements. As more and more incumbent LEC services become subject to competitive pressures, the public interest detriments of the cross-subsidy incentives inherent in sharing become worse as the costs that can be misallocated to services that remain subject to sharing requirements increase. Without the elimination of sharing, it might become necessary to adopt new structural or nonstructural safeguards to prevent or limit these misallocations. Rather than consider adopting such administratively burdensome requirements, we conclude that eliminating sharing is the more reasonable course.

152. Finally, elimination of sharing reduces our reliance on, and thus the importance of, jurisdictionally separated embedded costs. The sharing obligation is triggered when a price cap carrier reports interstate earnings above a specified level. Reported earnings are calculated on the portion of embedded investment and expenses that are allocated to the interstate jurisdiction by Part 36, the jurisdictional separations manual. Interstate rate base

[232] USTA Comments at 38-39; Southwestern Bell Comments at 29-31; Bell Atlantic Comments at 2-4, 6-7; GTE Comments at 39-40; Pacific Comments at 9; SNET Comments at 12-13; Ameritech Comments at 9; USTA Reply at 23 and Att. C at 19-21; NYNEX Reply at 19; Bell Atlantic Reply at 11.

[233] NYNEX Comments at 10; NYNEX Reply at 20; USTA Comments at 39; Ameritech Comments at 9-10; GTE Comments at 40.

and expense levels, and thus reported earnings, are also directly affected by accounting depreciation rates, which we prescribe for most incumbent price cap LECs. By contrast, in a competitive marketplace, decisions are governed by economic costs and economic depreciation rates. Reduced reliance on accounting costs thus facilitates our transition to the competitive paradigm of the 1996 Act.

153. Parties recommending that we continue to impose sharing obligations on price cap LECs do not make a persuasive case. MCI argues that sharing replicates a competitive market by permitting carriers to retain the benefits of increased productivity for a time, and then passing those benefits through to consumers.[234] On the contrary, competition forces a firm to pass through its cost reductions when other competing firms also enjoy the same cost reductions. Thus, a firm is compelled to pass through a reduction only when the industry as a whole experiences the same reduction. An X-Factor without sharing replicates these incentives. A firm that is more efficient than its competitors in a competitive market has the option of not lowering its price and reaping higher margins on the units it sells at the prevailing market price. Sharing would eliminate such an option. Furthermore, as we found in the LEC Price Cap Performance Review and reaffirm here, unlike a competitive market, sharing severely blunts a firm's efficiency incentives.[235] We also find that our new X-Factor prescription of 6.5 percent adequately ensures that access customers benefit from the efficiencies resulting from price cap regulation.

154. We also disagree with parties that argue that we must retain sharing to serve as either a backstop or a flow-through mechanism. The backstop function ensures that rates under the revised price cap plan do not become unreasonably high. The flow-through function ensures that ratepayers receive a reasonable portion of the productivity gains that incumbent LECs make pursuant to the incentives of price cap regulation. Both mechanisms were necessary in part because we were not certain that the productivity targets established by our X-Factors were sufficiently challenging. We conclude that, under the price cap plan we adopt today, the need for the beneficial functions served by sharing are outweighed by the benefits of eliminating sharing. First, we consider the X-Factor we adopt today, based on the TFP and input price differential calculations we discuss in Section III and Appendix D, to be a much more reliable measure of incumbent LEC potential productivity gains than the approach we used in the LEC Price Cap Order and the LEC Price Cap Performance Review. Therefore, we have substantially more confidence that the X-Factor we adopt in this Order will flow through a reasonable portion of LEC productivity gains to consumers. Second, our price cap plan retains the CPD. In light of our significantly increased productivity estimates, we find that the CPD serves an enhanced flow-through function by guaranteeing that access

[234] MCI Comments at 20.

[235] LEC Price Cap Performance Review, 10 FCC Rcd at 9045-46 (para. 188).

customers receive the first benefits of increased productivity under our no-sharing price cap plan.

155. For reasons discussed in the next section, we are adopting a price cap plan with one X-Factor, and therefore no longer need an alternative to fulfill the last purpose that sharing served under our previous price cap structure -- the matching function.

C. Number of X-Factors

156. Background. In the Price Cap Fourth Further Notice, we expressed concern that a price cap plan with one X-Factor might not adequately reflect legitimate differences in the economic conditions faced by each LEC, but that establishing an individual X-Factor for each LEC would not encourage LECs to improve their productivity. Therefore, we invited comment on whether to establish one X-Factor or multiple X-Factors in a long-term price cap plan.[236] In the Price Cap Second Further Notice, we asked for comment on the extent to which competition might affect productivity growth, and whether we should permit carriers to use different X-Factors in different parts of their service areas in which they face different levels of competition.[237] We invited parties to discuss this issue in conjunction with the issues we raised in the Price Cap Fourth Further Notice.[238]

157. Discussion. In the LEC Price Cap Performance Review, we tentatively concluded that we should establish more than one X-Factor because we were concerned that a single X-Factor might not reflect the heterogeneity in the economic conditions faced by individual LECs, and because we had little experience with price cap regulation. Based on the additional information available to us now, however, we have less concern about the impact of heterogeneity on the X-Factor component of the PCI formula, and conclude that mechanisms other than a multiple X-Factor price cap plan with sharing as the matching mechanism will better serve the public interest. Based on our recent price cap experience, it is not so clear that LEC heterogeneity should be a major determinant of how we should structure our X-Factor component of the price cap formula. Widespread heterogeneity among LECs has not been manifested through X-Factor elections. Substantially all mandatory price cap LECs have, for some portion of the time under the interim plan, elected the highest X-Factor available under the interim plan.[239] In addition, the studies undertaken in response to the Price Cap Fourth Further Notice make use of more post-divestiture data,

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[236] Price Cap Fourth Further Notice, 10 FCC Rcd at 13675-76 (para. 109).

[237] Price Cap Second Further Notice, 11 FCC Rcd at 930-31 (paras. 159-62).

[238] Price Cap Performance Review for Local Exchange Carriers, Order on Motion for Extension of Time, CC Docket No. 94-1, 11 FCC Rcd 1153 (Com.Car.Bur. 1995) (First Extension of Time Order).

[239] GTE has consistently selected the 4.0 percent X-Factor for certain study areas.

including data from four years of price cap regulation, and are more sophisticated than the studies on which we relied in the LEC Price Cap Performance Review. The new studies provide us with more hard evidence regarding price cap LECs' ability to reduce per-unit costs. The analysis we have undertaken, as well as those placed in the record, allows us to conclude that the X-Factor target we set is attainable by most if not all price cap carriers, including those price cap LECs with below-average earnings in a given year. If a particular LEC is unable to meet the 6.5 percent X-Factor target in a given year, the low-end adjustment mechanism prevents price cap regulation from becoming confiscatory. We conclude that the low-end adjustment mechanism is sufficient to address any heterogeneity that may exist among price cap LECs.

158. Furthermore, the record contains no convincing proposals that would allow us readily to identify any characteristics by which we could assign individual X-Factors to different price cap carriers, so that there could be multiple "no-sharing" X-Factors. Absent such a proposal, the only available approach is attaching differential sharing obligations to different X-Factors and allowing carriers to select from those options. This approach brings with it all the problems associated with sharing. We therefore conclude that a single X-Factor plan is likely to improve economic efficiency. Because our previous price cap rules included multiple X-Factors and different sharing requirements for each plan, LEC incentives differed according to the plan under which they were regulated. By eliminating sharing, all LECs will now face the same efficiency incentives, which eliminates any heterogeneity caused by our regulatory framework.

159. We also find that a single X-Factor plan will significantly simplify our rules.[240] Importantly, the use of a single X-Factor eliminates the need to adopt rules to limit or prevent carriers regulated by price caps from "gaming the system," i.e., preventing LECs from increasing their profits without improving their productivity growth by shifting between different X-Factor options. Finally, we note that a single X-Factor does not force all LECs to charge identical prices for access services, but only requires all price cap LEC rates to decline by the same percentage over time. Thus, heterogeneity in the price levels between LEC services remains embedded in our new price cap plan, as it was in our earlier plans.

160. We find that other aspects of our new price cap structure sufficiently address issues raised by heterogeneity among LECs. Our new X-Factor should deal adequately with situations in which incumbent LECs may have above-average opportunities for productivity enhancement. At the other end, we find, contrary to the arguments of Sprint and US West, that multiple X-Factors are not necessary to be fair to LECs with productivity growth less than the industry average[241] because the low-end adjustment mechanism provides adequate

[240] See Price Cap Fourth Further Notice, 10 FCC Rcd at 13678 (paras. 120-23).

[241] Sprint Comments at 10; US West Reply at 13-14.

protection for those LECs. We also note that basing the X-Factor on industry average data is not inherently unreasonable. The rail cost adjustment factor (RCAF) established by the Interstate Commerce Commission (ICC) was based on the industry-average level of productivity growth in the rail carrier industry. The court found that the ICC's use of the industry average was reasonable. "It is not arbitrary, . . . for an industry-wide regulatory scheme to use industry-wide average cost data."[242]

161. A number of price cap LECs suggest that we permit LECs to use a lower X-Factor once they meet certain competitive criteria. NYNEX, for instance, recommends that we do so based on the first six items listed in the "competitive checklist" identified in the Price Cap Second Further Notice.[243] NYNEX contends that we should permit a LEC to use an X-Factor of 75 percent of the baseline X-Factor if it has met the checklist criteria in 75 percent of its service area, and at least one competitor is operational in the region. NYNEX would permit a LEC to use an X-Factor of 60 percent of the baseline X-Factor if there is a "competitive presence" in areas representing 40 to 50 percent of the LEC's business access lines.[244] SNET and Ameritech make similar proposals.[245] Southwestern Bell argues that a competitive checklist should be the test to determine whether to remove services from price cap regulation rather than to permit a LEC to use a lower X-Factor.[246] We plan to address these proposals in a subsequent Order in our Access Reform proceeding, where we will set out in detail our market-based approach to access reform.

162. Finally, we note that the issues raised by Lincoln and Cincinnati Bell related to optional incentive regulation for small and mid-sized LECs are beyond the scope of this proceeding.

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[242] Edison v. ICC, 969 F.2d at 1226, citing Permian Basin Area Rate Cases, 390 U.S. 747, 805-06 (1968); 1 Alfred E. Kahn, The Economics of Regulation 45-46 and n.62 (1970).

[243] NYNEX Comments at 11-12, citing Price Cap Second Further Notice, 11 FCC Rcd at 906 (para. 108). (a) Competing providers of local switched telephone service have been authorized and have become operational; (b) local loops and switches have been unbundled; (c) intrastate expanded interconnection is available through tariff or contract; (d) service provider number portability is available; (e) compensation arrangements have been established for the LEC and its competitors to complete telephone calls originated on the other carrier's networks; and (f) competitors have access to directory assistance, 911, and other databases.

[244] NYNEX Comments at 11.

[245] SNET Comments at 6-9; Ameritech Comments at 10-12. In addition, Pacific argues that it has already removed barriers to entry in its region, and argues that it should be permitted to choose a lower X-Factor now rather than delaying while it goes through some certification process. Pacific Comments at 8-9.

[246] Southwestern Bell Comments at 27-28.

V. UPDATING THE X-FACTOR

A. Background

163. In the LEC Price Cap Order, we established X-Factors that remained in effect for the initial four-year period of price cap regulation.[247] In an ex parte statement filed on January 18, 1995, USTA proposed updating the X-Factor annually, based on a moving average of past productivity.[248] We tentatively concluded in the LEC Price Cap Performance Review that there were a number of benefits to adopting a moving average X-Factor. This approach would eliminate the need to review and revise the X-Factor during periodic performance reviews, which consume substantial public and private resources. We also found that a moving average might allow us to reduce or eliminate sharing by flowing through unit cost savings to customers on a lagged basis.[249]

164. We invited comment on several issues related to this topic in the Price Cap Fourth Further Notice. We asked whether a moving average would be an adequate replacement for performance reviews, and whether it would flow through unit cost reductions to consumers.[250] We also noted that there was disagreement in the record in the first phase of this proceeding regarding whether basing the X-Factor on an industry-wide moving average would encourage productivity growth, or whether it was possible for an individual LEC to lower the X-Factor by limiting its productivity growth. We invited comment on this issue. We also noted that resolution of this issue might turn on the extent to which there are mergers between price cap LECs.[251] Finally, we solicited comment on the administrative burdens of updating the X-Factor annually, specifically asking whether it would be necessary or desirable to establish a procedure to true up data reported in prior periods. We also asked whether it would be reasonable or preferable to update the X-Factor less frequently than annually.[252]

B. Discussion

[247] LEC Price Cap Order, 5 FCC Rcd at 6835 (para. 394).

[248] See LEC Price Cap Performance Review, 10 FCC Rcd at 9029-31 (paras. 150-54).

[249] LEC Price Cap Performance Review, 10 FCC Rcd at 9030 (para. 153).

[250] Price Cap Fourth Further Notice, 10 FCC Rcd at 13674 (para. 97).

[251] Price Cap Fourth Further Notice, 10 FCC Rcd at 13674 (para. 98).

[252] Price Cap Fourth Further Notice, 10 FCC Rcd at 13674 (para. 99).

165. We have decided not to adopt a moving average at this time. First, adopting a moving average in lieu of periodic performance reviews would represent a commitment to base changes in the X-Factor on a mechanical formula driven solely by the LECs' historical productivity growth over the previous five years. We have based our X-Factor prescription here on all available reliable historical information and calculated a series of averages based on differing time periods in order to determine an estimate of a reasonable, demanding X-Factor. We have not limited ourselves to a simple average of the past five years. Second, it is not clear at this time that mechanical extrapolation of historical productivity growth will continue to be a stable predictor of productivity growth following the 1996 Act. As BellSouth and US West point out, competition in the market for access services is likely to grow in the future. Because it is difficult to predict with certainty how competition will develop under the 1996 Act, or whether our price cap plan will remain reasonable, it is unclear whether any moving average formula would continue to produce reasonable X-Factors as competition grows. Thus, although we are certain that we have based our X-Factor prescription on a reliable estimate of LEC productivity growth, and that our X-Factor captures a reasonable portion of underlying productivity gains, we are not confident that there is any predetermined X-Factor calculation that will always produce reliable productivity growth estimates without further analysis, or that should be deemed presumptively correct indefinitely.

166. In the Price Cap Fourth Further Notice, we noted that we scheduled the first performance review to begin about three years after we adopted price cap regulation. We also sought comment on whether three years provides adequate data on which to base a performance review, or whether we should wait to develop more historical data on which to base the review.[253] Contrary to BellSouth, we conclude that we should schedule the next performance review to provide certainty for the industry. We conclude that we should initiate the next performance review about two years from now. This will give us an opportunity to observe how competition affects the incumbent LECs' performance under the price cap plan, and to make any necessary adjustments before the price cap plan leads to unreasonably high or low rates.

167. Some commenters maintain that a moving average is useful for smoothing out TFP as measured on an annual basis.[254] By adopting a fixed X-Factor based on a series of multi-year averages, we have smoothed out past volatility and ensured that any future yearly volatility in TFP will not affect the X-Factor. Southwestern Bell and BellSouth contend that a moving average replicates the effects of a competitive market, in that it permits carriers to retain productivity benefits for a short period of time, and then flows through those benefits

[253] Price Cap Fourth Further Notice, 10 FCC Rcd at 13675 (para. 107).

[254] Bell Atlantic Comments at 9-10; Ameritech Comments at 6; GTE Comments at 28-31.

to consumers.[255] We find that a moving average-based X-Factor might replicate the effects of competition, but only if the moving average formula continually produces reasonable estimates of expected LEC productivity growth. As we explained above, we cannot conclude on the basis of this record that there is such a moving average formula. Bell Atlantic opposes performance reviews, arguing that as long as earnings are used to check the performance of price caps from time to time, the perverse incentives of rate-of-return regulation will not be eliminated completely.[256] Bell Atlantic argues that this blunts efficiency incentives, and tends to shift the risk of investment from shareholders to ratepayers.[257] We share Bell Atlantic's concern about eliminating the perverse incentives of rate-of-return regulation, but do not agree that holding a performance review will significantly affect the beneficial incentives that should flow from the pure price cap regime we are here adopting. We have eliminated sharing requirements based on LEC earnings, and we have declined, in the Access Reform First Report and Order, many parties' suggestions that we reinitialize access rates based on LECs' individual rates of return. In addition, we plan to focus in our next performance review on ensuring, to the extent possible, that we do not substantially undermine each price cap incumbent LEC's incentives to improve its efficiency. For instance, we would plan to make adjustments based on demonstrated industry-wide performance or other generic factors, rather than adjustments that are tied to a particular price cap incumbent LEC's interstate earnings.[258]

VI. COMMON LINE ISSUES

A. Common Line Formula

168. Common lines are the local subscriber "loops" linking the customer's telephone to the local exchange office. Although common line costs are non-traffic sensitive, the original Part 69 access charge rules require that a portion of the cost is recovered through per minute rates. After recovery of a portion of common line costs through flat rates charged to end users, referred to as end user common line (EUCL) charges or subscriber line charges (SLCs), the remaining common line costs are recovered by carrier common line

[255] Southwestern Bell Comments at 21-22; BellSouth Reply, Att. at 41-42.

[256] Bell Atlantic Comments, Kahn Aff. at 9-10.

[257] Bell Atlantic, Kahn Aff. at 10-12.

[258] See also Section VIII.A., infra.

(CCL) charges that are assessed on IXCs and other access customers based on minutes of use.[259]

169. Because common line costs are non-traffic sensitive, growth in demand leads to a reduction in average per-minute common line costs. Therefore, in the LEC Price Cap Order, we established a PCI formula for the common line basket that differed from the PCI formula we established for the other three baskets, to ensure that carrier common line charges declined as common line demand increased.[260] Specifically, we added a term, "g/2," to the common line PCI formula, to represent half the growth in demand per line in the prior year.[261] This was because we originally concluded that both LECs and IXCs have the ability to influence common line growth, and that both LECs and IXCs should benefit from increases in demand.[262] In the Price Cap Fourth Further Notice, we noted that using an X-Factor based on TFP in the common line formula might tend to double-count demand growth. We therefore sought comment on whether reliance on TFP would warrant eliminating g/2 from the common line formula.[263] We also sought comment generally on revising the existing balanced 50-50 common line PCI formula, in the event we decided to retain a separate formula.[264]

170. In the Access Reform First Report and Order, we adopt for price cap incumbent LECs a common line rate structure that will recover almost all common line costs through flat charges on subscribers and on IXCs. LECs will phase out the per-minute CCL over a period of one to three years. We also decide to apply to the common line basket the formula that we use for the traffic-sensitive and trunking baskets as soon as the per-minute CCL charge has been phased out.[265] Thus, any double-counting that results from our adoption of a TFP-based X-Factor will be short-lived. Furthermore, we decide in the Access Reform First

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[259] Price Cap Fourth Further Notice, 10 FCC Rcd at 13680 (para. 130), citing LEC Price Cap Order, 5 FCC Rcd at 6793 (paras. 56-57).

[260] LEC Price Cap Order, 5 FCC Rcd at 6795 (paras. 71-73).

[261] LEC Price Cap Order, 5 FCC Rcd at 6795 (para. 73). The Commission did not adopt a common line formula based on an average of the per-line and per-minute approaches, because in some circumstances this would have produced the anomalous result of CCL rates increasing in response to increases in demand. Id. at 6795 (paras. 71-73). The mathematics of the common line formula are explained in detail in Appendix E of the LEC Price Cap Order, 5 FCC Rcd at 6942-44.

[262] LEC Price Cap Order, 5 FCC Rcd at 6795 (paras. 68-70).

[263] Price Cap Fourth Further Notice, 10 FCC Rcd at 13680 (paras. 134-35).

[264] Price Cap Fourth Further Notice, 10 FCC Rcd at 13680-81 (para. 136).

[265] Access Reform First Report and Order, Section III.A.4.

Report and Order that eliminating g/2 prior to the elimination of per-minute CCL charges might create unnecessary rate churn. Accordingly, we will not address common line formula issues further in this Order.

B. Reliance on Forecasted Data

171. Background. For price cap companies and other large incumbent LECs, CCL rates are calculated using forecasts of the amounts that will be recovered from SLCs. In the Price Cap Fourth Further Notice, we sought comment on whether it would be more accurate to base CCL rates on historical (previous year) rather than projected data for SLC revenues.[266]

172. Discussion. Southwestern Bell and MCI support using forecasted data,[267] while US West and USTA support using historical data.[268] We have decided to continue to rely on forecasted EUCL data in developing CCL rates. In our companion Access Reform First Report and Order, we revise our current common line rate structure rules, which now require LECs to recover most of their non-traffic-sensitive loop costs through traffic-sensitive loop rates, to reflect more closely the manner in which costs are incurred. Therefore, we have substantially revised our common line rate structure rules to reduce per-minute CCL charges, and have adopted rules to phase out CCL charges within the next two or three years. We see no need to make other substantial revisions to the CCL charge calculation method, such as switching from historical to forecasted data, when these charges will be phased out within a relatively short time.

VII. EXOGENOUS COST ISSUES

173. Background. The Commission has determined that certain costs incurred by LECs that are caused by administrative, legislative, or judicial requirements beyond their control, and not otherwise reflected in the PCI, should result in an adjustment to the PCI to ensure that the price cap formula does not lead to unreasonably high or unreasonably low rates.[269] Our rules currently list eight cost changes that may be afforded exogenous treatment

[266] Price Cap Fourth Further Notice, 10 FCC Rcd at 13681 (para. 137).

[267] Southwestern Bell Comments at 37-38; MCI Comments at 23-24.

[268] US West Comments at 26-27; USTA Comments at 45-46.

[269] Price Cap Fourth Further Notice, 10 FCC Rcd at 13681 (para. 138), citing LEC Price Cap Order, 5 FCC Rcd at 6807.

under the appropriate conditions.[270] In the Price Cap Fourth Further Notice, we noted that many if not all of the cost changes currently treated exogenously would be reflected in a moving average TFP-based X-Factor. We sought comment on whether it was possible to fashion an X-Factor that would incorporate all the cost changes listed as exogenous in our rules, and if not, which exogenous cost changes would remain outside the X-Factor calculation.[271] Because we have decided against adopting a moving average at this time, this issue is moot, and we will not discuss the comments filed in response to this issue.

174. In its pleadings filed in the LEC Price Cap Performance Review, MCI suggested limiting exogenous cost treatment to Commission-ordered changes that result in shifting costs between the interstate and intrastate jurisdictions, or between regulated and non-regulated accounts.[272] We also invited comment on MCI's suggestion in the Price Cap Fourth Further Notice.[273]

175. Discussion. We have decided not to adopt MCI's recommendation. We adopted the exogenous cost mechanism to ensure that the price cap formula does not lead to unreasonably high or unreasonably low rates.[274] Because of this, we have never strictly limited exogenous cost treatment to the cost changes listed in our rules. Rather, we have retained the discretion to consider extending exogenous cost treatment to "other extraordinary cost changes that the Commission shall permit or require."[275] Adopting MCI's proposal would eliminate this discretion. In a future Order in this Access Reform proceeding, we will be developing a market-based approach to regulating access rate levels as competition develops. We will also separately address issues related to embedded cost recovery in a competitive environment. In light of these ongoing proceedings, in which we will both work within and go beyond our current price cap regime, we do not find it advisable at this time to

[270] Section 61.45(d)(1) of the Commission's Rules, 47 C.F.R. § 61.45(d)(1). In addition to these rules, exogenous treatment for cost changes resulting from revisions in the Uniform System of Accounts (USOA) or Generally Accepted Accounting Principles (GAAP) is not permitted unless those revisions result in an economic cost change for the LEC. LEC Price Cap Performance Review, 10 FCC Rcd at 9089-90 (paras. 292-94).

[271] Price Cap Fourth Further Notice, 10 FCC Rcd at 13681 (paras. 138-40).

[272] See LEC Price Cap Performance Review, 10 FCC Rcd at 9087 (para. 287).

[273] Price Cap Fourth Further Notice, 10 FCC Rcd at 13681 (para. 141).

[274] See LEC Price Cap Order, 5 FCC Rcd at 6807 (para. 166).

limit the flexibility we have allowed within our price cap plan to deal with unusual circumstances.[276]

176. According to Frontier, it is inconsistent to require exogenous treatment of cost decreases such as expired reserve deficiency amortizations, while denying exogenous cost treatment of cost increases such as changes in the treatment of OPEB costs. Frontier argues further that neither of those cost changes affects the LEC's discounted cash flow.[277] We conclude that the expiration of reserve deficiency amortizations is distinguishable from the change in the treatment of OPEB costs for purposes of exogenous cost determinations. The reserve deficiency amortizations had begun under rate-or-return regulation, and were embedded in the initial price cap indices that had taken effect on January 1, 1991. To ensure that ratepayers under price cap regulation would not be required permanently to bear these temporary rate increases, we directed LECs to make downward exogenous cost adjustments to their price cap indices upon the expiration of those reserve deficiency amortizations.[278] Given that we had granted a temporary rate increase under our rate-of-return regime, failing to end that rate increase would have given LECs an unintended and undeserved windfall. Thus, our action to decrease rates is simply the second half of an action that began when we approved a temporary rate increase. For reasons we explained in the LEC Price Cap Performance Review, we found that the change in OPEB accounting no longer warranted the price cap equivalent of a rate-of-return amortization, and that it was no longer necessary to use the exogenous cost mechanism of price cap regulation to permit that temporary rate increase to continue.[279]

VIII. OTHER ISSUES

A. Application of the New Price Cap Formula to Incumbent LEC PCIs

177. In the LEC Price Cap Performance Review, we required the incumbent LEC price cap industry to adjust its PCIs in the 1995 annual access tariff filings, so that the PCIs would be at the levels they would have been at if the minimum X-Factor had been 4.0

[276] In reaching this conclusion, we do not interpret MCI's argument as implying that rates never change in competitive markets, as US West suggests. We understand MCI to mean that firms in competitive markets cannot change their rates unilaterally, but rather change their rates only in response to market forces. Accordingly, we find that it would not be reasonable to interpret MCI's proposal in this manner.

[277] Frontier Comments at 11-12.

[278] See LEC Price Cap Order, 5 FCC Rcd at 6808 (para. 173); LEC Price Cap Reconsideration Order, 6 FCC Rcd at 2673-74 (paras. 78-80). See also Access Reform First Report and Order, Section IV.C.2.

[279] LEC Price Cap Performance Review, 10 FCC Rcd at 9095-96 (paras. 307-08). The court held that our treatment of OPEB costs was reasonable. Bell Atlantic v. FCC, 79 F.3d at 1204.

percent since 1991. The Commission based its decision to do so on further evidence showing that one of the productivity studies upon which it had developed the original X-Factor had included anomalous data from 1984 that had resulted in an understatement of the LEC industry's historical productivity growth.[280] The Commission stressed that, under price caps, "LECs were supposed to become more efficient if they wished to exceed the earnings they would have been permitted under rate of return regulation, [and] [r]atepayers were to benefit from rates reduced to the level that would provide this challenge."[281] Although it did not order a reduction "based solely on the observation that LECs have experienced high earnings under price caps,"[282] the Commission noted that its underestimation of LEC productivity meant that "[s]ome portion of the LECs' increased earnings," which were high, was "obtained without any productivity improvements."[283] We found that such a result was counter to the balance between ratepayer and shareholder interests that had been intended under price caps, and we concluded that a prospective downward adjustment to the price cap indices was necessary to prevent the effects of the erroneously low productivity factor from being permanently embedded in the indices.[284] The court of appeals upheld our adjustment on judicial review in Bell Atlantic v. FCC.[285]

178. At the time the we made this prospective adjustment in the LEC Price Cap Performance Review, we also expressly and repeatedly indicated that the revised X-Factor employed to make that adjustment was an interim number.[286] We stated that we intended to complete our performance review inquiry into the appropriate non-interim productivity number "expeditiously."[287] Our action in this Order prescribing a new 6.5 percent X-Factor essentially constitutes the completion of our 1995 performance review with respect to the appropriate X-Factor. As described above, we conclude that the TFP methodology that we

[280] LEC Price Cap Performance Review, 10 FCC Rcd at 9053-54 (paras. 208-209).

[281] LEC Price Cap Performance Review, 10 FCC Rcd at 9070 (para. 246).

[282] LEC Price Cap Performance Review, 10 FCC Rcd at 9069 (para. 245).

[283] LEC Price Cap Performance Review, 10 FCC Rcd at 9070 (para. 246).

[284] LEC Price Cap Performance Review, 10 FCC Rcd at 9069-70 (paras. 245-46).

[285] Bell Atlantic v. FCC, 79 F.3d 1195 (D.C. Cir. 1996). See also, Administrators of the Tulane Educational Fund v. Shalala, 987 F.2d 790, 797 (D.C. Cir. 1993), cert. denied, 114 S.Ct. 740 (1994) (upholding Medicare "price cap" adjustment designed to avoid "permanently ingraining misclassified and nonallowable costs in future reimbursements to health care providers").

[286] See LEC Price Cap Performance Review, 10 FCC Rcd at 9050 (para. 198), 9054 (para. 211), 9055 (paras. 213-14), 9058-59 (paras. 223-24) (emphasizing "interim" nature of revised plan).

[287] LEC Price Cap Performance Review, 10 FCC Rcd at 9050 (para. 198).

have now developed is a more accurate method of measuring productivity performance than we have previously used and demonstrates that the interim X-Factor that we adopted in 1995 understates LEC industry productivity growth.

179. Similar to our action in the LEC Price Cap Performance Review, we here conclude that allowing all of the past two years of understated productivity to become permanently ingrained in LEC PCIs would not strike the proper balance between stockholder and ratepayer interests. At the same time we wish to limit harm to LEC productivity incentives that could result from the perception that our regulatory policies unnecessarily lack constancy. In this regard, our repeated emphasis that the X-Factor adopted in the LEC Price Cap Performance Review was "interim" should reasonably have put carriers on notice that another adjustment of the type we had adopted in that order would be possible -- perhaps beginning with the 1995 tariff year, the first year under the interim X-Factor. On the other hand, we anticipated the interim period to be of shorter duration. The longer period of reliance on the interim price cap plan has prompted a longer period of relative uncertainty than intended.[288] We conclude that an adjustment to the incumbent LECs' PCIs would reasonably balance ratepayer interests with our incentive-based regulatory policies in these circumstances. Accordingly, we require each price cap LEC to adjust its PCIs, effective July 1, 1997, to the levels for the 1997-98 tariff year that would have been in effect had we adopted the 6.5 percent X-Factor in time to become effective with the LECs' 1996 annual tariff filings. This adjustment would have no effect on revenues and earnings for the 1996-97 tariff year -- that is, like the adjustment upheld by the court in Bell Atlantic, the adjustment we require in this Order has no retroactive effect. This adjustment is also a more moderate approach than either of the specific reinitialization options for which we sought comment in the Access Reform Notice.[289]

180. To achieve the benefits of which they are capable, price cap regulation should not replicate rate-of-return regulation. Therefore, in the next performance review, we would plan to focus on ensuring, to the extent possible, that any adjustments to our rules would not substantially undermine each price cap incumbent LEC's incentives to improve its efficiency, particularly if similar adjustments may be made in other future performance reviews. For instance, we would prefer to make adjustments based on demonstrated industry-wide performance or other generic factors, rather than adjustments that are tied to a particular price cap incumbent LEC's interstate earnings.

[288] We had intended to complete action to replace the interim X-Factor before the 1996 annual access tariff filings, but were unable to meet that internal timetable as a result of the demands required to meet numerous statutory deadlines established in the 1996 Act.

[289] Access Reform Notice at paras. 223-30.

181. Adjustments based on industry-wide performance or similar factors would not destroy each price cap incumbent LEC's incentives to improve its efficiency, as would an approach of re-setting each incumbent LEC's interstate prices to earn a pre-determined rate of return, an approach we reject today in the Access Reform First Report and Order.[290] Rather, such an "industry-wide" approach would set up a relative performance/reward system, in which each price cap incumbent LEC would have incentives to strive to outperform the rest of the industry. Because no price cap incumbent LEC is very large relative to the industry as a whole, none determines industry-wide averages by its own actions. Consequently, each price cap incumbent LEC would have strong incentives to improve its efficiency even if adjustments to the X-Factor or other price cap rules based on industry-wide performance were imminently expected.

B. Video Dialtone Basket

182. In September 1995, the Commission adopted an Order requiring price cap carriers to establish a separate price cap basket for video dialtone services.[291] We also decided that costs and revenues from video dialtone services should be excluded from the calculation of a LEC's sharing obligations until the costs for those services exceed de minimis levels.[292] We sought comment on how to define "de minimis" for these purposes.[293] The 1996 Act, however, cancelled all Commission actions taken in the video dialtone docket. Instead, LECs are now permitted to participate in video markets as cable operators, through provision of common carrier video services, or as operators of non-common carrier "open video systems."[294] Therefore, we hereby terminate the video dialtone portion of this proceeding we initiated in the Price Cap Third Further Notice.

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[290] Access Reform First Report and Order, Section IV.B.2.c.

[291] Price Cap Performance Review for Local Exchange Carriers, Third Further Notice of Proposed Rulemaking, CC Docket No. 94-1, 10 FCC Rcd 11098, 11101 (para. 15) (1995) (Price Cap Third Further Notice). Video dialtone service consists of: (1) a basic transmission service available on a non-discriminatory basis to multiple video programmers and a means by which customers of video programmers can obtain access to any or all video programming offered over the transmission platform; and (2) optional enhanced and other non-common carrier products and services related to video dialtone. Price Cap Third Further Notice, 10 FCC Rcd at 11098-99 (para. 2).

[292] Price Cap Third Further Notice, 10 FCC Rcd at 11105 (para. 35).

[293] Third Further Notice, 10 FCC Rcd at 11106 (paras. 39-42).

[294] 1996 Act, 47 U.S.C. § 653. See Implementation of Section 302 of the Telecommunications Act of 1996, CS Docket No. 96-46, 11 FCC Rcd 14639 (1996).

C. Miscellaneous Issues

183. NCTA and MFS recommend "promoting competition" rather than investing the time and resources necessary to complete this rulemaking.[295] As explained in Section II.C. of this Order, our decisions here play a critical role in restructuring regulation to match a developing competitive marketplace. This Order joins recently adopted pro-competitive, deregulatory rules implementing Section 251 and related provisions of the 1996 Act, and is interrelated with the Access Reform First Report and Order. Thus, conforming our price cap regulations to the paradigm of the 1996 Act has not precluded us in any way from "promoting competition." Furthermore, until the telecommunications market can become competitive enough to warrant removing all services from price cap regulation, it is important that the price cap plan replicate as nearly as possible the incentives of a competitive market.

184. AT&T asserts that service quality has declined while the LECs have increased their productivity in the past, and recommends reflecting service quality changes in TFP calculations.[296] BellSouth argues that AT&T's assertion is inconsistent with the Commission's conclusion in the LEC Price Cap Performance Review that service quality has not declined significantly,[297] and that it would be unreasonable to assume that LECs would permit service quality to decline when competition is beginning to develop.[298] In the LEC Price Cap Performance Review, we addressed this issue and found that there were no significant changes in service quality since we adopted price caps.[299] Nothing in this record convinces us to alter this conclusion. Therefore, we conclude that TFP adjustments for service quality are not necessary at this time.[300]

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[295] NCTA Reply at 4; MFS Reply at 1-3. Similarly, ICA suggests that "promoting competition" and then conducting performance reviews to determine which services to remove from price cap regulation would be less administratively burdensome than reviewing moving average X-Factor calculations. ICA Comments at 9.

[296] AT&T Comments at 24 and App. A at 63-65; AT&T Reply at 34-35.

[297] BellSouth Reply at 12-13, citing LEC Price Cap Performance Review, 10 FCC Rcd at 9121 (para. 365).

[298] BellSouth Reply, Att. at 31-35.

[299] LEC Price Cap Performance Review, 10 FCC Rcd at 8988 (para. 62), 9121 (para. 365).

[300] We will soon be releasing an Order addressing price cap LEC service quality issues. See Policy and Rules Concerning Rates for Dominant Carriers and Amendment of Part 61 of the Commission's Rules to Require Quality of Service Standards in Local Exchange Carrier Tariffs, Memorandum Opinion and Order, CC Docket No. 87-313, FCC No. 97-168 (adopted May 14, 1997).